Contents

FUNDAMENTAL TECHNIQUES

INVITED PAPERS

PRINCIPLES OF ACOUSTO-OPTICS
Adrianus Korpel 3

MAGNETO-OPTIC PRINCIPLES, MATERIALS AND APPLICATIONS
Di Chen 9

TUNABLE SOURCES
Michael Hercher 17

LIQUID CRYSTALS
Richard A. Soref 23

HOT-PRESSED MATERIALS
Kenneth J. Teegarden 29

CONTRIBUTED PAPERS

COMPACT VIDEO TAPE RECORDERS OF EXCEPTIONAL PERFORMANCE AND RELIABILITY
Don J. Cochran and Alex R. Maxey 37

CIRCULAR DICHROISM IN LIQUID CRYSTALS MIXTURES AND SEARCH FOR A PIEZO-OPTIC EFFECT ASSOCIATED WITH ULTRASONIC FIELDS
Jean-Luc Dion and Michel Bader 43

BIREFRINGENCE MODE OF OPERATION OF 9/65/35 PLZT CERAMIC
A. S. Khalafalla, J. Jurisson, D. Burbank and J. W. Schuck . . . 49

THERMAL PROPERTIES OF HOT-PRESSED CADMIUM SULFIDE AND HOT-PRESSED MAGNESIUM FLUORIDE
M. Jirmanus, N. Jirmanus, W. M. Chu Wang, K. A. McCarthy and H. H. Sample 55

ACOUSTIC PROPERTIES OF HOT-PRESSED CADMIUM SULFIDE AND HOT-PRESSED MAGNESIUM FLUORIDE
W. M. Chu Wang, M. Jirmanus, N. Jirmanus, K. A. McCarthy and H. H. Sample 59

TECHNIQUES AND APPLICATIONS

INVITED PAPERS

LASER COMMUNICATIONS
Monte Ross 63

OPTICAL MEMORIES
R. D. Lohman 85

DISPLAYS
Carl Machover 89

OPTICAL WORD DETECTION
A. Vander Lugt, F. B. Rotz and J. P. Morrison 95

CONTRIBUTED PAPERS

A PROPOSED NOVEL ELECTRO-OPTIC T. V. DISPLAY SYSTEM
C. N. W. Litting, P. Lilley and D. C. Smith 99

A PULSED PHOTOELECTRIC SCANNING SYSTEM FOR ANGULAR MEASUREMENT IN ASTROMETRY
Peter Jones, E. Coyne, J. Davis and C. Watts, Jr. 105

A SIMPLE LIGHT PEN FOR STORAGE OSCILLOSCOPE
Paolo Mancini and Franco Granelli 113

LIGHT DIFFRACTION BY ULTRASOUND IN A LIQUID WAVEGUIDE
C. J. Kramer and P. Das 117

THE EFFECT OF A CHANGING SPECTRUM ON TRANSFORM SPECTROMETRY
Gene A. Ware 125

PIEZOELECTRIC TRANSDUCERS FOR ACOUSTO-OPTIC APPLICATIONS
Jason H. Eveleth 131

OPTICAL ACTIVITY AND EXTERNAL FORCES
Evangelos M. Anastassakis 135

REMOTE DETECTION TECHNIQUES
E. R. Schildkraut, James R. Engel and Thomas B. Hirschfield . . 145

FIBER OPTIC CABLE TEST EVALUATION
Robert L. Lebduska 151

NEAR UV AND BLUE DYE LASERS
D. P. Prosdorf 163

APPLICATIONS OF OPTICAL ACTIVITY TO OPTICAL COMMUNICATIONS
Arthur J. Einhorn 165

MODULAR, BIOCULAR EYEPIECE DISPLAY FOR THERMAL SYSTEMS
David K. Anderson and Thomas E. Moyers 171

INVITED PAPER

POTENTIAL OF THE ELECTRO-OPTICS INDUSTRY
Herbert A. Elion 179

Author Index

Anastassakis, E. M. 135
Anderson, D. K. 171
Bader, M. 43
Burbank, D. 49
Chen, Di 9
Cochran, D. J. 37
Coyne, R. 105
Das, P. 117
Davis, J. 105
Dion, J-L. 43
Einhorn, A. J. 165
Elion, H. A. 179
Engel, J. R. 145
Eveleth, J. H. 131
Granelli, F. 113
Hercher, M. 17
Hirschfield, T. B. 145
Jirmanus, M. 55, 59
Jirmanus, N. 55, 59
Jones, P. 105
Jurrison, J. 49
Khalafalla, A. S. 49
Korpel, A. 3
Kramer, C. J. 117
Lebduska, R. L. 151
Lilley, P. 99
Litting, C. N. W. 99
Lohman, R. D. 85
Machover, C. 89
Mancini, P. 113
Maxey, A. R. 37
McCarthy, K. A. 55, 59
Morrison, J. P. 95
Moyers. T. E. 171
Prosdorf, D. P. 163
Ross, M. 63
Rotz, F. B. 95
Sample, H. H. 55, 59
Schildkraut, E. R. 145
Schuck, J. W. 49
Smith, D. C. 99
Soref, R. A. 23
Teegarden, K. J. 29
Vander Lugt, A. 95
Wang, W. M. Chu 55, 59
Ware, G. A. 125
Watts, C. Jr. 105